ECE 499 / 599: Materials Science of Nanotechnology
TR 10-11:20 am, 019 Milam
Spring 2008, v1.1

Instructor: J.F. Conley, (737-9874, KEC 3089, jconley@eecs.oregonstate.edu)
Office hours: After class or by appointment.

Prerequisite: ECE 317 Electronic Materials and Devices or ENGR 321 Materials Science

Texts: 1) G. Cao, Nanostructures & Nanomaterials: Synthesis, Properties, & Applications,
       (Imperial College Press, London, 2004). [Required]
       2) Various additional readings will also be assigned.

Course Outline (topic / reading)
1. Course overview / (Ch. 1)
2. Physical chemistry of solid surfaces (Ch. 2)
3. 0-D nanostructures: Nanoparticles (Ch. 3)
4. 1-D nanostructures: Nanowires (Ch. 4)
5. 2-D nanostructures: Thin films (Ch. 5)
6. Carbon nanostructures & other nanomaterials (Ch. 6)
7. Nano-fabrication methods (Ch. 7)
8. Characterization of nanomaterials (Ch. 8)
9. Applications of nanomaterials
10. Emerging topics (class presentations)

Grading
1. Midterm (in class, April 29th) 25%
2. Term paper / presentation 50%
3. Final, Wednesday, June 11th @ 12:00pm 25%